

Application No.: 10/715,239

Art Unit: 2123

JUN 08 2007

Docket No.: MWS-086

AMENDMENTS TO THE DRAWINGS

The attached replacement sheet, which includes Figure 22, replaces the original sheet including Figure 22. In the replacement drawing sheet, Applicant has amended the label of step 426 to read "Are There Unprocessed Output Ports?" rather than "Are There Unprocessed Input Ports?"

Attachment: Replacement sheet

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REMARKS

In this Response, Applicant has amended claims 1, 20, 39, 42-50, 52-56, 58 and 61. Claims 1-66 are currently pending, of which claims 1, 20, 39 and 58 are independent. No new matter has been added.

Applicant notes with appreciation that the Examiner deems claims 8, 15-18, 27, 34-37, 46, 53-56 and 64 to recite allowable subject matter (Office Action, paragraph 22).

Applicant has amended independent claim 1 to recite "identifying a component of the graphical model for conversion into a reference." Similarly, Applicant has amended independent claim 20 to recite "an identifier for identifying a component of the graphical model for conversion into a reference," and has amended independent claim 39 to recite "instructions for identifying a component of the graphical model for conversion into a reference." Applicant has also amended claims 1 and 58 to recite "storing the reference." Similarly, Applicant has amended claim 20 to recite "a storage facility for storing the reference," and has amended claim 39 to recite "instructions for storing the reference." No new matter has been added by these claim amendments.

I. Objection to the Drawings

The Examiner objected to Figure 22 of the drawings asserting that "in Block 426, "input ports" appears to be incorrect and it appears that it should be "output ports"" (Office Action, paragraph 2). In the amendment to the drawings, Applicant has amended the label of step 426 in Figure 22 so that it reads "output ports," and requests that the Examiner reconsider and withdraw the objection to Figure 22.

II. Objection to the Specification

The Examiner objected to the specification because of informalities identified in the Office Action (Office Action, paragraph 3). In the amendments to the specification, Applicant has amended the specification to address the issues raised by the Examiner. No new matter has been added by these amendments. The amendments are itemized below.

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On page 16, lines 25-26, "an Output and Derivative method are needed" has been amended to read "Output and Derivative methods are needed."

On page 39, line 7, "such at the time taken to execute" has been amended to read "such as the time taken to execute."

On page 46, line 28, "computer executable steps" has been amended to read "computer executable instructions." Accordingly, in the claim amendments, Applicant has amended independent claim 39 so that it recites "computer executable instructions," rather than "computer executable steps."

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the objection to the specification.

III. Objection to the Claims

The Examiner objected to claim 61 due to an informality (Office Action, paragraph 5). In the claim amendments, Applicant has amended claim 61 so that it recites "selecting individual of the plurality of components that matches the selected patterns," and requests that the Examiner reconsider and withdraw the objection to claim 61.

IV. Summary of Claim Rejections

Claims 1-66 stand rejected under 35 U.S.C. §101 as being directed to non-statutory subject matter.

Claims 1-4, 6, 20-23, 25, 39-42 and 44 stand rejected under 35 U.S.C. §103(a) as being unpatentable over United States Patent Publication Number 2003/0159129 to Frank et al (hereafter "Frank") in view of United States Patent Number 6,219,586 to Sakai (hereafter "Sakai").

Claims 5, 24 and 43 stand rejected under U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of United States Patent Publication Number 2004/0089141 to Georges et al (hereafter "Georges").

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Claims 7, 26 and 45 stand rejected under U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of United States Patent Number 6,208,955 to Provan et al (hereafter "Provan").

Claims 9, 28 and 47 stand rejected under U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of United States Patent Publication Number 2002/0080174 to Kodosky et al (hereafter "Kodosky").

Claims 10, 12-14, 29, 31-33, 48 and 50-52 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of United States Patent Publication Number 2004/0031015 to Ben-Romdhane et al (hereafter "Ben-Romdhane").

Claims 11, 30 and 49 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of the Ben-Romdhane reference and the Kodosky reference.

Claims 19, 38 and 57 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of United States Patent Publication Number 2004/0056908 to Bjornson et al (hereafter "Bjornson").

Claims 58-60 and 62 stand rejected under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference.

Claim 61 stands rejected under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference, and further in view of the Georges reference.

Claim 63 stands rejected under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference, and further in view of the Provan reference.

Claim 65 stands rejected under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference, and further in view of the Kodosky reference.

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Claim 66 stands rejected under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference, and further in view of the Bjornson reference.

V. Claim Rejections under 35 U.S.C. §101

The Examiner rejects claims 1-66 under 35 U.S.C. §101 as allegedly being directed to non-statutory subject matter (Office Action, paragraphs 7 and 7.1-7.4). More particularly, the Examiner alleges that claims 1-66 do not produce any "useful, tangible and concrete results" (Office Action, paragraphs 7.1-7.4).

In the claim amendments, Applicant has amended independent claims 1 and 58 to recite "storing the reference." Similarly, Applicant has amended independent claim 20 to recite "a storage facility for storing the reference," and has amended independent claim 39 to recite "instructions for storing the reference." Applicant respectfully submits that amended claims 1, 20, 39 and 58 are directed to statutory subject matter for at least the following reasons. First, the stored reference is available for use and is thus a *tangible* result. Second, the result of the above claims is *useful* since stored references may be used to organize and coordinate the overall modeling effort. Third, the result is *concrete* since processing the same component in the graphical model will result in the same reference being created and stored.

In addition, with regard to claim 20, the Examiner further alleges that "the system as claimed comprises only software. If all parts of a system are software, then the system becomes functional descriptive material and is not statutory" (Office Action, paragraph 7.2). Applicant has amended the preamble of independent claim 20 to recite "In an electronic device, a system," and believes the claim as amended to recite statutory subject matter under 35 U.S.C. §101.

Further, with regard to claim 39, the Examiner further alleges that "the medium could be any medium including the network and paper medium. Because of this, the claim is not patentable under 35 USC 101. Only computer readable storage or recording medium holding computer executable instructions is patentable" (Office Action, paragraph 7.3). Applicant has amended the preamble of independent claim 39 to recite "A computer-readable medium holding computer executable instructions," and believes the claim as amended to recite statutory subject matter under 35 U.S.C. §101.

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Claims 2-19 depend from independent claim 1 and, as such, incorporate all of the features of claim 1. Claims 21-38 depend from independent claim 20 and, as such, incorporate all of the features of claim 20. Claims 40-57 depend from independent claim 39 and, as such, incorporate all of the features of claim 39. Claims 59-66 depend from independent claim 58 and, as such, incorporate all of the features of claim 58. Applicant respectfully requests the Examiner to reconsider and to withdraw the rejection of claims 1-66 under 35 U.S.C. §101.

VI. Claim Rejections under 35 U.S.C. §103(a)

A. Claims 1-4, 6, 20-23, 25, 39-42 and 44

The Examiner rejects claims 1-4, 6, 20-23, 25, 39-42 and 44 under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference (Office Action, paragraph 10). Applicant respectfully traverses the 35 U.S.C. §103(a) rejections of claims 1-4, 6, 20-23, 25, 39-42 and 44 as set forth below.

1) Claim 1

Amended independent claim 1 recites:

“In an electronic device, a method of altering a graphical model, comprising:
identifying a component of the graphical model for *conversion into a reference*;
processing the component to identify similarities with other components or similarities with selected characteristics, and automatically converting the component into the reference; and
storing the reference.” [emphasis added]

The Examiner alleges at paragraph 10.1 of the Office Action:

“Frank et al. teaches Component model for real time system control. Specifically, as per claim 20, Frank et al. teaches system for altering a graphical model (Page 1, Para 0002, L15-22; Page 2, Para 0019, L1-5; Page 5, Para 0062), the system comprising:
an identifier for identifying a component of the graphical model for conversion (Page 1, Para 0002, L15-22; Page 1, Para 0003, L1-5; Page 2, Para

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0019, L1-15; Page 3, Para 0030, L7-9; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062)...." [emphasis added]

However, the Examiner admits at paragraph 10.1 of the Office Action:

"Frank et al. does not expressly teach a converter for processing the component to identify one of similarities with other components and similarities with selected characteristics."

The Examiner further alleges at paragraph 10.2 of the Office Action:

"As per Claims 1-4, 6, 39-42 and 44, these are rejected based on the same reasoning as Claims 20-23 and 25, supra. Claims 1-4, 6, 39-42 and 44 are method and medium claims reciting the same limitations as Claims 20-23 and 25, as taught throughout by Frank et al. and Sakai."

Nonetheless, as the Examiner admits at paragraph 10.1 of the Office Action, Frank does not disclose or suggest "processing the component to identify similarities with other components or similarities with selected characteristics, and automatically converting the component into the reference," as recited in independent claim 1.

Applicant disagrees with the Examiner's allegation regarding claim 1. A combination of Frank and Sakai does not disclose or suggest "identifying a component of the graphical model for *conversion into a reference*" or "automatically converting the component into the reference," as required by claim 1. For example, the cited sections of Frank discuss creation of a component of a certain component-type from an existing component generic class (Frank, paragraph [0041]). A framework identifies a component-type object associated with the component-type of the component to be created (Frank, paragraph [0041]). After creation of the component, a *reference is created from the component instance to the component-type object* (Frank, paragraph [0041]). This reference, usually a pointer, designates that the particular component instance belongs to the component-type described by the component-type object (Frank, paragraph [0041]).

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Applicant respectfully submits that Frank does not disclose or suggest "identifying a component of the graphical model for conversion into a reference," as recited in claim 1. As discussed above, Frank discusses *creating a reference from a component instance*. In contrast, claim 1 requires identifying a component of a graphical model for *conversion into a reference*. Frank does not disclose or suggest this feature of claim 1.

Further, Applicant respectfully submits that Frank also does not disclose or suggest "automatically converting the component into the reference," as recited in claim 1. As discussed above, Frank discusses *creating a reference from a component instance*. In contrast, claim 1 requires automatically *converting a component into a reference*. Frank does not disclose or suggest this feature of claim 1.

Combining Sakai with Frank does not remedy the shortcomings of Frank so as to disclose "identifying a component of the graphical model for conversion into a reference," or "automatically converting the component into the reference," as recited in claim 1. For example, Sakai addresses reference numbers or codes associated with customer orders (Sakai, column 19, lines 50-51), but does not discuss a reference as described in the instant application and as recited in claim 1. The disclosure of Sakai does not disclose or suggest the features of claim 1 missing from Frank, namely "identifying a component of the graphical model for conversion into a reference," and "automatically converting the component into the reference."

Since the combination of Frank and Sakai does not disclose or suggest at least "identifying a component of the graphical model for conversion into a reference," or "automatically converting the component into the reference," as recited in claim 1, Frank and Sakai do not support a valid 35 U.S.C. §103(a) rejection of claim 1. Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 1 in view of the above arguments.

II) Claims 2-4 and 6

Claims 2-4 and 6 depend from independent claim 1 and, as such, incorporate all of the elements of claim 1. Accordingly, claims 2-4 and 6 are allowable for at least the reasons set

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forth above with respect to claim 1. Applicant therefore respectfully requests reconsideration and allowance of claims 2-4 and 6.

iii) Claim 20

Amended independent claim 20 recites:

"In an electronic device, a system for altering a graphical model, the system comprising:
an identifier for identifying a component of the graphical model *for conversion into a reference*;
a converter for processing the component to identify similarities with other components or similarities with selected characteristics, and automatically converting the component into the reference; and
a storage facility for storing the reference." [emphasis added]

Applicant respectfully submits that Frank and Sakai, alone or in any reasonable combination, fail to disclose or suggest at least the following features of claim 20: "an identifier for identifying a component of the graphical model for conversion into a reference," and "a converter for processing the component to identify similarities with other components or similarities with selected characteristics, and automatically converting the component into the reference." As discussed above in connection with claim 1, the combination of Frank and Sakai fails to disclose "an identifier for identifying a component of the graphical model for conversion into a reference" and "a converter for processing the component to identify similarities with other components or similarities with selected characteristics, and automatically converting the component into the reference," and therefore the combination of Frank and Sakai does not support a valid 35 U.S.C. §103(a) rejection of claim 20. Applicant respectfully requests reconsideration and allowance of claim 20.

iv) Claims 21-23 and 25

Claims 21-23 and 25 depend from independent claim 20 and, as such, incorporate all of the elements of claim 20. Accordingly, claims 21-23 and 25 are allowable for at least the reasons set forth above with respect to claim 20. Applicant therefore respectfully requests reconsideration and allowance of claims 21-23 and 25.

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v) Claim 39

Amended independent claim 39 recites:

“A computer-readable medium holding computer executable instructions for carrying out a method of altering a graphical model, the instructions comprising:
instructions for identifying a component of the graphical model *for conversion into a reference*;
instructions for processing the component to identify similarities with other components or similarities with selected characteristics, and automatically converting the component into the reference; and
instructions for storing the reference.” [emphasis added]

Applicant respectfully submits that Frank and Sakai, alone or in any reasonable combination, fail to disclose or suggest at least the following features of claim 39: “instructions for identifying a component of the graphical model for conversion into a reference,” and “instructions for processing the component to identify similarities with other components or similarities with selected characteristics, and automatically converting the component into the reference.” As discussed above in connection with claim 1, the combination of Frank and Sakai fails to disclose “instructions for identifying a component of the graphical model for conversion into a reference” and “instructions for processing the component to identify similarities with other components or similarities with selected characteristics, and automatically converting the component into the reference,” and therefore the combination of Frank and Sakai does not support a valid 35 U.S.C. §103(a) rejection of claim 39. Applicant respectfully requests reconsideration and allowance of claim 39.

vi) Claims 40-42 and 44

Claims 40-42 and 44 depend from independent claim 39 and, as such, incorporate all of the elements of claim 39. Accordingly, claims 40-42 and 44 are allowable for at least the reasons set forth above with respect to claim 39. Applicant therefore respectfully requests reconsideration and allowance of claims 40-42 and 44.

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B. Claims 5, 24 and 43

The Examiner rejects claims 5, 24 and 43 under U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of the Georges reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejections of claims 5, 24 and 43 as set forth below.

A combination of Frank, Sakai and Georges does not disclose or suggest the features of claims 5, 24 and 43. As discussed previously in connection with claim 1, the combination of Frank and Sakai fails to disclose or suggest the features of claims 1, 20 and 39 from which claims 5, 24 and 43 depend, respectively. The teachings of Georges do not supplement the combination of Frank and Sakai in such a way as to cure the shortcomings of Frank and Sakai with respect to the features of independent claims 1, 20 and 39 and dependent claims 5, 24 and 43.

The Examiner cites the Georges reference as teaching that the identifier utilizes a checksum to identify selected patterns and selecting the component that matches the patterns, as required by claims 5, 24 and 43 (Office Action, paragraph 11.1). Nonetheless, Georges fails to disclose or suggest "identifying a component of a graphical model for conversion into a reference" or "automatically converting the component into the reference," as recited in claims 5, 24 and 43. The Examiner does not cite the Georges reference as disclosing or suggesting these features of claims 5, 24 and 43.

For at least the reasons presented above, Frank, Sakai and Georges, alone or in any reasonable combination, fail to disclose or suggest the features of claims 5, 24 and 43. Therefore, the combination of Frank, Sakai and Georges does not support a valid 35 U.S.C. §103(a) rejection of claims 5, 24 and 43.

C. Claims 7, 26 and 45

The Examiner rejects claims 7, 26 and 45 under U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of the Provan

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reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejections of claims 7, 26 and 45 as set forth below.

A combination of Frank, Sakai and Provan does not disclose or suggest the features of claims 7, 26 and 45. As discussed previously in connection with claim 1, the combination of Frank and Sakai fails to disclose or suggest the features of claims 1, 20 and 39 from which claims 7, 26 and 45 depend, respectively. The teachings of Provan do not supplement the combination of Frank and Sakai in such a way as to cure the shortcomings of Frank and Sakai with respect to the features of independent claims 1, 20 and 39 and dependent claims 7, 26 and 45.

The Examiner cites the Provan reference as teaching that the identifier locates a selected acyclic graph of blocks and selects the component that contains the selected acyclic graph of blocks (Office Action, paragraph 12.1). Nonetheless, Provan fails to disclose or suggest "identifying a component of the graphical model for conversion into a reference" or "automatically converting the component into the reference," as recited in claims 7, 26 and 45. The Examiner does not cite the Provan reference as disclosing or suggesting these features of claims 7, 26 and 45.

For at least the reasons presented above, Frank, Sakai and Provan, alone or in any reasonable combination, fail to disclose or suggest the features of claims 7, 26 and 45. Therefore, the combination of Frank, Sakai and Provan does not support a valid 35 U.S.C. §103(a) rejection of claims 7, 26 and 45.

D. Claims 9, 28 and 47

The Examiner rejects claims 9, 28 and 47 under U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of the Kodosky reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejections of claims 9, 28 and 47 as set forth below.

A combination of Frank, Sakai and Kodosky does not disclose or suggest the features of claims 9, 28 and 47. As discussed previously in connection with claim 1, the combination of

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Frank and Sakai fails to disclose or suggest the features of claims 1, 20 and 39 from which claims 9, 28 and 47 depend, respectively. The teachings of Kodosky do not supplement the combination of Frank and Sakai in such a way as to cure the shortcomings of Frank and Sakai with respect to the features of independent claims 1, 20 and 39 and dependent claims 9, 28 and 47.

The Examiner cites the Kodosky reference as teaching that the identifier solicits user interaction to participate in a selection of components based on at least one of pattern matching (Office Action, paragraph 13.1). Nonetheless, Kodosky fails to disclose or suggest "identifying a component of the graphical model for conversion into a reference" or "automatically converting the component into the reference," as recited in claims 9, 28 and 47. The Examiner does not cite the Kodosky reference as disclosing or suggesting these features of claims 9, 28 and 47.

For at least the reasons presented above, Frank, Sakai and Kodosky, alone or in any reasonable combination, fail to disclose or suggest the features of claims 9, 28 and 47. Therefore, the combination of Frank, Sakai and Kodosky does not support a valid 35 U.S.C. §103(a) rejection of claims 9, 28 and 47.

E. Claims 10, 12-14, 29, 31-33, 48 and 50-52

The Examiner rejects claims 10, 12-14, 29, 31-33, 48 and 50-52 under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of the Ben-Romdhane reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejections of claims 10, 12-14, 29, 31-33, 48 and 50-52 as set forth below.

A combination of Frank, Sakai and Ben-Romdhane does not disclose or suggest the features of claims 10, 12-14, 29, 31-33, 48 and 50-52. As discussed previously in connection with claim 1, the combination of Frank and Sakai fails to disclose or suggest the features of claims 1, 20 and 39 from which claims 10 and 12-14, 29 and 31-33, and 48 and 50-52 depend, respectively. The teachings of Ben-Romdhane do not supplement the combination of Frank and Sakai in such a way as to cure the shortcomings of Frank and Sakai with respect to the features of independent claims 1, 20 and 39 and dependent claims 10, 12-14, 29, 31-33, 48 and 50-52.

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The Examiner cites the Ben-Romdhane reference as teaching that the converter creates a new model and copies the component into the new model, as required by claims 10, 12-14, 29, 31-33, 48 and 50-52 (Office Action, paragraph 14.1). Nonetheless, Ben-Romdhane fails to disclose or suggest "identifying a component of the graphical model for conversion into a reference" or "automatically converting the component into the reference," as recited in claims 10, 12-14, 29, 31-33, 48 and 50-52. The Examiner does not cite the Ben-Romdhane reference as disclosing or suggesting these features of claims 10, 12-14, 29, 31-33, 48 and 50-52.

For at least the reasons presented above, Frank, Sakai and Ben-Romdhane, alone or in any reasonable combination, fail to disclose or suggest the features of claims 10, 12-14, 29, 31-33, 48 and 50-52. Therefore, the combination of Frank, Sakai and Ben-Romdhane does not support a valid 35 U.S.C. §103(a) rejection of claims 10, 12-14, 29, 31-33, 48 and 50-52.

F. Claims 11, 30 and 49

The Examiner rejects claims 11, 30 and 49 under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of the Ben-Romdhane reference and the Kodosky reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejections of claims 11, 30 and 49 as set forth below.

A combination of Frank, Sakai, Ben-Romdhane and Kodosky does not disclose or suggest the features of claims 11, 30 and 49. As discussed previously in connection with claims 10, 12-14, 29, 31-33, 48 and 50-52 (Section E of this Response), the combination of Frank, Sakai and Ben-Romdhane fails to disclose or suggest the features of claims 1, 20 and 39 from which claims 11, 30 and 49 depend, respectively. The teachings of Kodosky do not supplement the combination of Frank and Sakai in such a way as to cure the shortcomings of Frank and Sakai with respect to the features of independent claims 1, 20 and 39 and dependent claims 11, 30 and 49, as discussed previously in connection with claims 9, 28 and 47 (Section D of this Response).

For at least the reasons presented above, Frank, Sakai, Ben-Romdhane and Kodosky, alone or in any reasonable combination, fail to disclose or suggest the features of claims 11, 30

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and 49. Therefore, the combination of Frank, Sakai, Ben-Romdhane and Kodosky does not support a valid 35 U.S.C. §103(a) rejection of claims 11, 30 and 49.

G. Claims 19, 38 and 57

The Examiner rejects claims 19, 38 and 57 under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Sakai reference, and further in view of the Bjornson reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejections of claims 19, 38 and 57 as set forth below.

A combination of Frank, Sakai and Bjornson does not disclose or suggest the features of claims 19, 38 and 57. As discussed previously in connection with claim 1, the combination of Frank and Sakai fails to disclose or suggest the features of claims 1, 20 and 39 from which claims 19, 38 and 57 depend, respectively. The teachings of Bjornson do not supplement the shortcomings of Frank and Sakai with respect to the features of independent claims 1, 20 and 39 and dependent claims 19, 38 and 57.

The Examiner cites the Bjornson reference as teaching that the reference comprises at least one of a library reference, as required by claims 19, 38 and 57 (Office Action, paragraph 16.1). Nonetheless, Bjornson also fails to disclose or suggest "identifying a component of the graphical model for conversion into a reference" or "automatically converting the component into the reference," as recited in claims 19, 38 and 57. The Examiner does not cite the Bjornson reference as disclosing or suggesting these features of claims 19, 38 and 57.

For at least the reasons presented above, Frank, Sakai and Bjornson, alone or in any reasonable combination, fail to disclose or suggest the features of claims 19, 38 and 57. Therefore, the combination of Frank, Sakai and Bjornson does not support a valid 35 U.S.C. §103(a) rejection of claims 19, 38 and 57.

H. Claims 58-60 and 62

The Examiner rejects claims 58-60 and 62 under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejections of claims 58-60 and 62 as set forth below.

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i) Claim 58

Amended independent claim 58 recites:

“In an electronic device, a method of simplifying a model, comprising:
identifying repeating occurrences of a pattern among a plurality of components;
creating a new model based on the pattern;
replacing each of the repeating occurrences of the pattern with a reference to the new model; and
storing the reference.” [emphasis added]

The Examiner alleges at paragraph 17.1 of the Office Action:

“As per claim 58, Frank et al. teaches in an electronic device, a method of simplifying a model (Page 1, Para 0002, L15-22; Page 2, Para 0019, L1-5; Page 5, Para 0062), comprising:
providing a plurality of components forming the model (Page 1, Para 0002, L15-22; Page 1, Para 0003, L1-5; Page 2, Para 0019, L1-15; Page 3, Para 0030, L7-9; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062); and
identifying repeating occurrences of a pattern among the plurality of components (Page 1, Para 0005);
replacing each of the repeating occurrences of the pattern with a reference to the new model (Page 2, Para 0019, L1-5; Page 3, Para 0041, L5-9 and L13-20; Page 5, Para 0062).” [emphasis added]

However, Frank does not disclose or suggest “replacing each of the repeating occurrences of the pattern with a reference to the new model,” as recited in independent claim 58. Applicant disagrees with the Examiner’s allegation regarding claim 58. A combination of Frank and Ben-Romdhane does not disclose or suggest “replacing each of the repeating occurrences of the pattern with a reference to the new model,” as recited in claim 58. The cited sections of Frank do not disclose or suggest replacing each of the repeating occurrences of the pattern among components with a reference to the new model. Frank discusses creating a reference from a component instance, but does not disclose or suggest that repeating occurrences of patterns among components are replaced by a reference. In contrast, claim 58 requires “replacing each of the repeating occurrences of the pattern with a reference to the new model.”

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Combining Ben-Romdhane with Frank does not remedy the shortcomings of Frank so as to disclose or suggest "replacing each of the repeating occurrences of the pattern with a reference to the new model," as recited in claim 58. The Examiner cites the Ben-Romdhane reference for teaching that the converter creates a new model and copies the component into the new model, as required by claim 58 (Office Action, paragraph 17.1). Nonetheless, Ben-Romdhane fails to disclose or suggest "replacing each of the repeating occurrences of the pattern with a reference to the new model," as recited in claim 58. The Examiner does not cite the Ben-Romdhane reference as disclosing or suggesting this feature of claim 58.

Since the combination of Frank and Ben-Romdhane does not disclose or suggest at least "replacing each of the repeating occurrences of the pattern with a reference to the new model," as recited in claim 58, Frank and Ben-Romdhane do not support a valid 35 U.S.C. §103(a) rejection of claim 58. Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 58 in view of the above arguments.

ii) Claims 59, 60 and 62

Claims 59, 60 and 62 depend from independent claim 58 and, as such, incorporate all of the elements of claim 58. Accordingly, claims 59, 60 and 62 are allowable for at least the reasons set forth above with respect to claim 58. Applicant therefore respectfully requests reconsideration and allowance of claims 59, 60 and 62.

I. Claim 61

The Examiner rejects claim 61 under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference, and further in view of the Georges reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of claim 61 as set forth below.

A combination of Frank, Ben-Romdhane and Georges does not disclose or suggest the features of claim 61. As discussed previously in connection with claims 58-60 and 62 (Section H of this Response), the combination of Frank and Ben-Romdhane fails to disclose or suggest the features of claim 58 from which claim 61 depends. The teachings of Georges do not

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supplement the shortcomings of Frank and Ben-Romdhane with respect to the features of independent claim 58 and dependent claim 61.

For example, Georges fails to disclose or suggest "replacing each of the repeating occurrences of the pattern with a reference to the new model," as required by claim 58. The Examiner does not cite the Georges reference as disclosing or suggesting the above feature of claim 58.

For at least the reasons presented above, Frank, Ben-Romdhane and Georges, alone or in any reasonable combination, fail to disclose or suggest the features of claim 61. Therefore, the combination of Frank, Ben-Romdhane and Georges does not support a valid 35 U.S.C. §103(a) rejection of claim 61.

J. Claim 63

The Examiner rejects claim 63 under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference, and further in view of the Provan reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of claim 63 as set forth below.

A combination of Frank, Ben-Romdhane and Provan does not disclose or suggest the features of claim 63. As discussed previously in connection with claims 58-60 and 62 (Section H of this Response), the combination of Frank and Ben-Romdhane fails to disclose or suggest the features of claim 58 from which claim 63 depends. The teachings of Provan do not supplement the shortcomings of Frank and Ben-Romdhane with respect to the features of independent claim 58 and dependent claim 63.

The Examiner cites the Provan reference as teaching that identifying the repeating occurrences of the pattern comprises locating a selected acyclic graph of blocks amongst the plurality of components and selecting one of the plurality of components that contains the selected acyclic graph of blocks, as required by claim 63 (Office Action, paragraph 19.1). Nonetheless, Provan fails to disclose or suggest "replacing each of the repeating occurrences of

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the pattern with a reference to the new model," as recited in claim 58. The Examiner does not cite the Provan reference as disclosing or suggesting the above feature of claim 58.

For at least the reasons presented above, Frank, Ben-Romdhane and Provan, alone or in any reasonable combination, fail to disclose or suggest the features of claim 63. Therefore, the combination of Frank, Ben-Romdhane and Provan does not support a valid 35 U.S.C. §103(a) rejection of claim 63.

K. Claim 65

The Examiner rejects claim 65 under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference, and further in view of the Kodosky reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of claim 65 as set forth below.

A combination of Frank, Ben-Romdhane and Kodosky does not disclose or suggest the features of claim 65. As discussed previously in connection with claims 58-60 and 62 (Section H of this Response), the combination of Frank and Ben-Romdhane fails to disclose or suggest the features of claim 58 from which claim 65 depends. The teachings of Kodosky do not supplement the shortcomings of Frank and Ben-Romdhane with respect to the features of independent claim 58 and dependent claim 65.

The Examiner cites the Kodosky reference as teaching that identifying the repeating occurrences of the pattern comprises soliciting user interaction to participate in a selection of components based on at least one of pattern matching, as required by claim 65 (Office Action, paragraph 20.1). Nonetheless, Kodosky fails to disclose or suggest "replacing each of the repeating occurrences of the pattern with a reference to the new model," as recited in claim 58. The Examiner does not cite the Kodosky reference as disclosing or suggesting the above feature of claim 58.

For at least the reasons presented above, Frank, Ben-Romdhane and Kodosky, alone or in any reasonable combination, fail to disclose or suggest the features of claim 65. Therefore, the

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combination of Frank, Ben-Romdhane and Kodosky does not support a valid 35 U.S.C. §103(a) rejection of claim 65.

L. Claim 66

The Examiner rejects claim 66 under 35 U.S.C. §103(a) as being unpatentable over the Frank reference in view of the Ben-Romdhane reference, and further in view of the Bjornson reference. Applicant respectfully traverses the 35 U.S.C. §103(a) rejection of claim 66 as set forth below.

A combination of Frank, Ben-Romdhane and Bjornson does not disclose or suggest the features of claim 66. As discussed previously in connection with claims 58-60 and 62 (Section H of this Response), the combination of Frank and Ben-Romdhane fails to disclose or suggest the features of claim 58 from which claim 66 depends. The teachings of Bjornson do not supplement the shortcomings of Frank and Ben-Romdhane with respect to the features of independent claim 58 and dependent claim 66.

The Examiner cites the Bjornson reference as teaching that the reference comprises at least one of a library reference, as required by claim 66 (Office Action, paragraph 21.1). Nonetheless, Bjornson fails to disclose or suggest "replacing each of the repeating occurrences of the pattern with a reference to the new model," as recited in claim 58. The Examiner does not cite the Bjornson reference as disclosing or suggesting this feature of claim 58.

For at least the reasons presented above, Frank, Ben-Romdhane and Bjornson, alone or in any reasonable combination, fail to disclose or suggest the features of claim 66. Therefore, the combination of Frank, Ben-Romdhane and Bjornson does not support a valid 35 U.S.C. §103(a) rejection of claim 66.

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CONCLUSION

In light of the above amendments and arguments, Applicant respectfully submits that all of the pending claims are in condition for allowance. Should the Examiner feel that a teleconference would expedite the prosecution of this application, the Examiner is urged to contact the Applicant's attorney at (617) 227-7400.

Please charge any shortage or credit any overpayment of fees to our Deposit Account No. 12-0080, under Order No. MWS-086. In the event that a petition for an extension of time is required to be submitted herewith, and the requisite petition does not accompany this response, the undersigned hereby petitions under 37 C.F.R. §1.136(a) for an extension of time for as many months as are required to render this submission timely. Any fee due is authorized to be charged to the aforementioned Deposit Account.

Dated: June 8, 2007

Respectfully submitted,

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Attachment